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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

POPHAM, JEFFREY D

ART UNIT	PAPER NUMBER
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2137

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,829

Applicant(s)

GILBERT ET AL.

Examiner

Jeffrey D. Popham

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-14, 23-25 and 38-54 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 7-14, 23-25 and 38-54 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Remarks

Claims 7-14, 23-25, and 38-54 are pending.

Claim Objections

1. Claims 7, 42, and 46 are objected to because of the following informalities:
 - Claim 7, line 7 reads "selecting at least a portion of the personal identification data fields formatted". Claim 7, line 10 reads "one-way encrypting the personal identification data fields selected". These should read "selecting at least a portion of the formatted personal identification fields" and "one-way encrypting the selected personal identification data fields", respectively. This problem occurs in other parts throughout the claims and all of them must be corrected, so that the claims are clear.
 - Claim 42, line 1: "formatting be personal" should be "formatting the personal".
 - Claim 42, line 2: "second portion of our said personal" should be "second portion of said personal".
 - Claim 46, line 3: "de-one or more master records" should be "one or more master records".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 23-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A signal-bearing medium is defined in the specification to be any computer readable medium, including a computer telephone network. This is not statutory because the program is not contained on a physical medium, such as a CD-ROM, but is rather transmitted and not stored.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7-10, 12-14, 23-25, and 38-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zubeldia (U.S. Patent 6,397,224) in view of Gasch (Gasch, "0.2.7.5 One-way hashing", 7/9/1999, pp. 1-8, obtained from <http://www.fearme.com/misc/alg/node33.html>), Schneier (Schneier, "Applied Cryptography", Second Edition, 1996, pp. 429-431), and Halamka (Halamka et al., "Managing Care in an Integrated Delivery System via an Intranet", 1998, pp. 1-5, obtained from <http://www.amia.org/pubs/symposia/D004881.PDF>).

Regarding Claim 14,

Zubeldia discloses a method for de-identification of records by a programmed client computer, comprising:

Monitoring a file directory (Column 9, line 16 to Column 10, line 15);

Detecting presence of a new file in the file directory (Column 9, line 16 to Column 10, line 15);

Obtaining a mapping module for the new file (Column 5, lines 26-56);

Locating personal identification data fields in records in the new file using the mapping module (Column 5, lines 26-56);

Parsing the personal identification data fields (Column 5, lines 26-56);

Formatting the personal identification data fields (Column 5, lines 26-56);

Selecting at least a portion of the personal identification data fields formatted (Column 5, lines 26-56);

Deleting any of the personal identification data fields not selected (as well as selected personal identification data fields once encryption is complete) (Column 7, lines 50-55; and Column 10, line 58 to Column 11, line 3);

Determining if the personal identification data fields selected are to be encoded (Column 5, lines 26-56);

Encoding the personal identification data fields to be encoded
(Column 5, lines 26-56);

First one-way encrypting the seed value identifiers with a first
encryption algorithm (Column 5, lines 26-56);

Second one-way encrypting the seed value identifiers with a
second encryption algorithm (Column 6, lines 7-12);

Using both the first and second one-way encryption results as
alphanumeric match codes (Column 7, lines 17-27); and

Wherein the de-identified records comprising the match codes are
created at the programmed client computer (Column 7, lines 17-27).

Zubeldia also discloses the conversion of binary to alphanumeric
and vice versa, since in order to perform encryption such as SHA-1, the
algorithm must use binary bits of data.

Zubeldia does not disclose the concatenation of a seed value onto
the encoded personal identification fields, concatenating portions of the 2
encryption results together, and transmitting the de-identified records to a
server computer.

Gasch, however, discloses concatenating the personal
identification data fields encoded with a seed value to provide seed value
identifiers (Page 1). It would have been obvious to one of ordinary skill in
the art at the time of applicant's invention to incorporate the one-way
hashing technique of Gasch into the anonymous linking system of

Zubeldia in order to minimize the number of collisions within the system, so that two entities will have a lower chance of having the same match code.

Schneier, however, discloses concatenating at least a portion of each one-way encryption result from the first one-way encrypting and the second one-way encrypting corresponding to input strings to respectively provide binary strings for each of the input strings (Pages 430-431, Length of One-Way Hash Functions section). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the method of increasing hash length from Schneier into the anonymous linking system of Zubeldia as modified by Gasch in order to provide a more secure hash that can't be broken as easily through birthday attacks, thus allowing a malicious person to break into other people's files.

Halamka, however, discloses that the records are transmitted to a server computer (Page 1, Data Sources section). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the health care server of Halamka into the anonymous linking system of Zubeldia as modified by Gasch and Schneier in order to ensure that all information held within the server is held securely, only allowing those with access roles of the correct level to access the medical information (Pages 4-5, SECURITY AND CONFIDENTIALITY section).

Regarding Claim 24,

Claim 24 is a signal bearing medium claim that corresponds to method claim 14 and is rejected for the same reasons.

Regarding Claims 7-10, 12, 13, 23, 38-43, and 47-54,

These claims are method, system, and signal-bearing medium claims that are broader than method claim 14, and are rejected for the same reasons.

Regarding Claim 25,

Zubeldia discloses that the programmed client computer comprises programs (modules) for the different functions of the method (Column 3, line 63 to Column 4, line 15).

Regarding Claim 44,

Zubeldia discloses determining the second portion of the parsed personal identification data fields to be one-way encrypted in response to deleting the first portion of the parsed personal identification data fields (Column 6, lines 7-12). When the personal identification data fields are sent to the second identity reference module in Zubeldia, only those fields that are required for encoding are sent, meaning that the other fields have already been removed from the input stream.

Regarding Claim 45,

Gasch discloses concatenating the personal identification data fields that are one-way encrypted with a seed value to provide seed value identifiers (Page 1).

Regarding Claim 46,

Zubeldia discloses comparing the one or more de-identified records with one or more master records to determine linkage between the one or more de-identified records and one or more master records (Column 7, lines 8-16).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zubeldia in view of Schneier and Halamka.

When Gasch is taken out of the combination, Zubeldia in view of Schneier and Halamka discloses that the personal identification fields are not concatenated with a seed value prior to the one-way encrypting.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey D. Popham whose telephone number is (571)-272-7215. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571)272-3865. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2137

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew B. Smithers
MATTHEW SMITHERS
PRIMARY EXAMINER
Art Unit 2137